

WHAT DRIVES HIV/AIDS EPIDEMIC IN SUB-SAHARAN AFRICA?

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Background: Throughout African continent, HIV/AIDS epidemic has become a major cause of death and poverty. This paper decomposes the impact of the determinants of the evolution of HIV/AIDS pandemic in Sub-Saharan Africa from 1997 to 2005. We classify our set of determinants into socio-economic, epidemiological and sociologic and cultural. Socio-economic determinants are income inequalities, gender inequality, income level, poverty, access to health care, the proportion of mobile population in total population, education level and governance. Sociocultural variables are some religious and cultural practices, ethnic diversity and the access to information. Epidemiological variables are the age of the epidemic, condom use, presence of ulcerative STI's and the nutritional status. In this paper, we try to assess the importance of each group of determinants in the spread of the epidemic across the continent.

Method: Using a panel data of 42 African countries from the 1997-2005 period, we examine the link between the three categories of determinants on the one hand and HIV/AIDS epidemic. After a *logit* transformation of HIV prevalence rate among adult population (15-49) in order to apply a linear model to this non-linear variable, we estimate our equation with the random effects model to account for time-invariant effects. We also include an “*aea*” dummy in order to capture sub-regional differences in the way the different determinants affect HIV/AIDS epidemic in Africa. We then estimate the same equation using the *logit* transformation of HIV prevalence rate among young population (15-24) which is a better indicator of the evolution of an epidemic. Finally, we regress the same equation with the generalized method of moments (GMM) to accounts for dynamic effects in our model.

Results: Our results are robust and our analysis shows that epidemiological and sociocultural variables have a greater impact than socio-economic ones. More importantly, within the group of

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socio-economic variables, education and women's economic independence and income inequality appear very important in determining the spread of the pandemic.

Conclusion: These results are of great importance for the fight against the pandemic. In particular, they show a direction in the utilization of funds allocated to the fight against HIV/AIDS. In view of that, we recommend that cost-effectiveness analyses be done before funds are allocated; so that there go were they are most effective in reducing the curve of the pandemic, namely in empowering women by educating them and helping them to acquire a form of economic independence and in reducing the income gap between rich and poor.

Keywords: Determinants, HIV/AIDS epidemic, Sub-Saharan Africa.